

Message

From: Ho, Yenhung [Ho.Yenhung@epa.gov]
Sent: 5/26/2021 8:54:20 PM
To: Albright, David [Albright.David@epa.gov]
Subject: FW: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit
Attachments: CES Draft Class VI Permit (CH)(DA)(SR) rev1.docx

From: Shari Ring <Shari.Ring@cadmusgroup.com>
Sent: Wednesday, May 26, 2021 1:11 PM
To: Ho, Yenhung <Ho.Yenhung@epa.gov>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Calvin

Attached is the updated CES permit addressing comments from you and David. On one edit, we may want to check with Headquarters.

Please let me know if you have any questions.

I have a note on my calendar that CES will reply by next Monday; we'll be ready to look at the updated information starting next week.

From: Ho, Yenhung <Ho.Yenhung@epa.gov>
Sent: Wednesday, May 26, 2021 3:14 PM
To: Shari Ring <Shari.Ring@cadmusgroup.com>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Shari,

I was trying to confirm if we had suggested/requested in RAIs any pre-injection logging, sampling, and testing other than those specified at 40 CFR 146.87. If none, no change to part J needed.

From: Shari Ring <Shari.Ring@cadmusgroup.com>
Sent: Wednesday, May 26, 2021 11:50 AM
To: Ho, Yenhung <Ho.Yenhung@epa.gov>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Calvin,

I am working through the permit edits this afternoon and have a question:

On the pre-injection testing provision at part J, you commented that we should include other logs, surveys and tests we requested/mentioned in RAIs.

Might it be easier to reference Attachment G, which encompasses all the broad categories in the subparts there?

Give me a call if you'd like to discuss.

Thanks!

From: Ho, Yenhung <Ho.Yenhung@epa.gov>
Sent: Friday, May 21, 2021 2:16 PM
To: Shari Ring <Shari.Ring@cadmusgroup.com>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Shari,

David's and my comments on the draft are attached. Please let me know if you have any questions. We should be receiving CES's updated permit application by 5/31.

From: Shari Ring <Shari.Ring@cadmusgroup.com>
Sent: Wednesday, April 28, 2021 10:14 AM
To: Ho, Yenhung <Ho.Yenhung@epa.gov>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Attached is the updated permit text.

Please let me know if you need anything else. I can create Attachment I now or closer to the time we are assembling the draft permit (it won't take long).

From: Ho, Yenhung <Ho.Yenhung@epa.gov>
Sent: Wednesday, April 28, 2021 12:24 PM
To: Shari Ring <Shari.Ring@cadmusgroup.com>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Shari,

Yes, we plan to have CES review the draft permit. Please update the permit language as soon as you can.

From: Shari Ring <Shari.Ring@cadmusgroup.com>
Sent: Wednesday, April 28, 2021 9:12 AM
To: Ho, Yenhung <Ho.Yenhung@epa.gov>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: RE: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

Hi Calvin,

Based on Molly's reply to my email, I don't think we need to ask anything of CES. Cadmus can fill in the template and we can attach it to the draft permit. Am I correct that CES will get a chance to review the draft permit? If so, it may be enough to just add this to the permit and let them read the template language.

We need to update the permit language too – I can do that at any time.

From: Ho, Yenhung <Ho.Yenhung@epa.gov>
Sent: Wednesday, April 28, 2021 11:12 AM
To: Shari Ring <Shari.Ring@cadmusgroup.com>
Cc: Rao, Kate <Rao.kate@epa.gov>
Subject: [EXT] FW: Draft Language for Class VI Stimulation Program in Permit

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Hi Shari,

Please incorporate Molly's bullet points below and the information from the attached draft template into our request for CES.

Thanks,
Calvin

From: McEvoy, Molly <mcevoy.molly@epa.gov>
Sent: Wednesday, April 28, 2021 7:43 AM
To: Albright, David <Albright.David@epa.gov>; Ho, Yenhung <Ho.Yenhung@epa.gov>; Shari.Ring@cadmusgroup.com; Newman, Sharon <Newman.Sharon@epa.gov>; Bates, William <bates.william@epa.gov>; Kobelski, Bruce <Kobelski.Bruce@epa.gov>
Cc: Feuer, Daniel <Feuer.Daniel@epa.gov>; Carey, Kyle <Carey.Kyle@epa.gov>
Subject: Draft Language for Class VI Stimulation Program in Permit

Hello all,

Per our discussion last week, please find attached draft template language for Section K.2 of the Class VI permit front matter and a draft template for Attachment I (Stimulation Program) based on Region 5's work. Below are some bullets to provide context for the proposed changes, which are still in draft form.

- EPA has learned that at least two CO2 injection well operators have observed clogging of the injection well perforations with particles (e.g., salt precipitates) over time. The clogging resulted in decreased injectivity, requiring some form of stimulation to clear the perforations. Based on what we have learned, EPA anticipates that this clogging could be a potential issue for other CO2 injection projects in the future.
- The UIC Class VI regulations at 40 CFR 146.88(a) require that all stimulation programs be approved by the Director as part of the permit application and incorporated by permit. If the initial permit does not include a stimulation program and the operator identifies a need for well stimulation later on in the life of the project, a major permit modification would be necessary.
- Although CES does not anticipate well stimulation at this time, EPA suggests that CES prepare a draft stimulation program to avoid the need for a permit modification if stimulation were to become necessary in the future.

Please let me know if you have any questions or need anything else.

Thanks,
Molly

Molly McEvoy
Office of Ground Water & Drinking Water

U.S. Environmental Protection Agency
Washington, D.C.
Phone: 202-564-4765